

WHAT IS CLAIMED IS:

Sub 7
1. A process for producing a contact structure for connecting two substrates comprising the following process steps:

applying solder material to terminal areas of a first substrate to form spacing metallizations; and

bonding the first substrate with a second substrate, the bonding between the terminal areas of the first substrate and a contact surface area of the second substrate being performed by means of a partial fusion of the spacing metallizations.

2. The process according to claim 1, wherein the spacing metallizations are partially fused by means of application of laser energy to the spacing metallizations.

3. The process according to claims 1, wherein the terminal areas of the first substrate are provided with an intermediate metallization prior to applying solder material.

4. The process according to claims 1, wherein the spacing metallizations are given a spherical shape.

5. The process according to claims 1, wherein the adhesive compound is applied to the spacing metallizations.

6. The process according to claims 1 wherein the adhesive compound is applied to contact areas of the second substrate provided for bonding to the spacing metallizations.

7. The process according to claim 5, wherein the adhesive compound is applied by means of an application device which can be moved relative to the spacing metallizations.

8. The process according to claim 5, wherein the adhesive compound is applied by immersing the spacing metallizations in a volume of the conductive adhesive compound.

9. The process according to claim 1, wherein, to produce the contact structure, the first substrate with its spacing metallizations is positioned against the contact surface of the second substrate with interposition of the conductive adhesive mass.

10. The process according to claims 1, wherein a gap remaining between the substrate surfaces after bonding the two substrates is filled with a filler material.

11. The process according to claim 10, wherein the filler material serves to secure the mechanical joint between the first substrate and second substrate.